



xiGuard

Photocatalytic Coating

Environmental Coatings Inc. PRODUCT DATA SHEET 0.3% Window Grade Solution

PRODUCT DESCRIPTION: OxiGuard 0.3% solution (WG) is a non-toxic, environmentally friendly, water and titania based, photocatalytic mineral film former that contains nanoparticles (0.3% solids) of highly photoactive anatase Titanium Dioxide suspended in water.

OxiGuard 0.3% air-dries to form amorphous mineral film surfaces that are self-cleaning, odor killing and germ resisting when irradiated by UV light. End use applications include self-cleaning windows, environmental control, infection control and odor abatement.

APPLICATION BENEFITS: When energized by UV light (abundant in sunlight and sufficiently present in indoor fluorescent lighting), a OxiGuard coated surface is:

- photocatalytic - it perpetually creates hydroxyl radicals that continuously oxidize organic matter.
- hydrophilic - it causes water to sheet away.
- long lasting - it will continue to stay clean, resist germs, and eliminate odors for years.

RECOMMENDED USES: OxiGuard WG 0.3% solution's clarity and transparency make it ideal for use on windows. OxiGuard WG 0.3% can be applied to glass or plastic windows. For optimal results, apply a barrier film of OxiShield WG 0.3% first and then apply the OxiGuard WG .03% as a final coat.

PHYSICAL DATA:

Solids by Volume = <0.3%	Solids by Weight = 0.3%
Weight/Gallon = 8.3 -8.4 lbs. per Gallon	VOC Levels with additives = 0 Grams / Liter
pH = 7.0 - 8.5	Adhesion= 4B-5B
Color= Slightly milky, clear when applied	Hardness when cured= 5-7H

SURFACE PREPARATION: Glass - clean the glass substrate thoroughly with soap and water. Window cleaning products containing ammonia should be avoided to prevent a disruption of the pH balance in the OxiGuard solution. Ceramics or plastic – wash surface clean and dry surfaces before application. For best results on windows, apply OxiShield barrier film first, then apply OxiGuard. This promotes adhesion and long lasting self-cleaning effect.

LIGHT REQUIREMENTS: OxiGuard coated surfaces need the UV irradiance of 0.1 mw/cm² to trigger the decomposition of organic matter and 0.001 mw/cm² for odor abatement and sanitation. A 20-watt fluorescent lamp irradiates UV in the range of 0.002-0.003 mw/cm² from a distance of 1 meter. A 20-watt black light bulb irradiates UV in the range 0.1mw/cm² from a distance of 1 meter. Sunlight provides ample UV for exterior surfaces, even on cloudy days.

APPLICATION: Spray apply with a power spray gun and tip size of 0.031 inches (0.8mm) or less. Apply from 12-18". Allow up to 4 hours for drying. Allow up to 1 day of UV exposure before checking for photocatalytic effect.

EXPECTED COVERAGE: 500-1,000 sq. ft./liter at 1-3 microns wet (6-18 grams/ sq. meter)

NUMBER OF COATS: 2 coats (Note: each coat is an ultra fine misting until film is formed). Allow 2 minutes between coats.